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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,301	11/27/2001	Jonathan R. Andersh	57205US002	9002
32692	7590	01/13/2005	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			CHAVIS, JOHN Q	
			ART UNIT	PAPER NUMBER
			2124	

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/995,301

Applicant(s)

ANDERSH ET AL.

Examiner

John Chavis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11/27/01, 6/27/02 and 2/24/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/27/02, 2/24/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Information Disclosure Statement*

1. The information disclosure statement (IDS) submitted on 6/27/02 and 2/24/03 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Tantry et al. (5,398,336).

Claims  
1. A system comprising:  
a set of objects encapsulating  
computational models; and  
  
a software program executing  
within a computer operating  
environment and having an  
embedded control module to  
invoke the computational models  
in parallel.

Tantry  
See col. 2 lines 9-14.

See col. 2 lines 42-46, col.  
3 lines 45-50 and col. 4 lines  
17-21.

2. The system of claim 1,  
further comprising a model  
aggregator to receive input  
values from the control module  
and to distribute the input  
values to the objects.

See col. 5 lines 6-28.

3. The system of claim 2,  
wherein each model includes at  
least one input and at least  
one output, and further wherein

" " "

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the model aggregator stores configuration data mapping a set of input slots to the inputs of the models.

4. The system of claim 3, wherein the configuration data maps a single input slot to multiple inputs of different models.

" " "

5. The system of claim 2, wherein the model aggregator receives predicted output values from the objects and communicates the predicted output values to the control module.

See col. 5 lines 53-61.

6. The system of claim 5, wherein the control module displays the predicted output values from the computational models simultaneously.

See again the distributed function in the cited portion above.

7. The system of claim 1, wherein the control module receives input from a user and communicates the inputs to the object models as inputs to the computational models.

See col. 6 lines 13-26.

8. The system of claim 1, wherein the software program comprises process management software to manage a manufacturing process.

See col. 8 lines 24-30.

9. The system of claim 8, wherein the control module receives measured process data and communicates the measured process data to the object models as inputs to the computational models.

" " "

10. The system of claim 2, further comprising a configuration module to select a set of models in response to user input, and to direct the model aggregator to create the set

See col. 9 lines 17-24, which provides for the creation of models.

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of objects to encapsulate  
the computational models.

11. The system of claim 10,  
wherein the configuration  
module, the control module  
and the set of objects  
comprises reusable software  
components conforming to a  
software component  
architecture.

See col. 9 lines 25-30, which  
enables persistent entries into  
the system (reuse). Also, see  
col. 2 lines 9-14 and col. 4  
lines 22-44.

12. The system of claim 1,  
wherein the objects comprise  
reusable model software  
components arranged as one  
or more dynamic linked  
libraries (DLLs) invoked by  
the control module.

See col. 5 lines 12-16.

13. The system of claim 1,  
further comprising one or  
more dynamic linked  
libraries (DLLs) that  
implement:  
the set of objects; the  
control module;  
a configuration module invoked  
by the software program to  
configure the set of objects  
in response to user input; and  
a model aggregator to receive  
input values and commands  
from the control module and  
to distribute the input values  
and commands to the objects  
for invoking the  
computational models.

See the cited portions above.

In reference to claims 14 and 34, see the rejection of claim 1.

Claim 15 is rejected as claim 12.

As per claim 16, see the rejection of claims 5, 6 and 9.

The features of claims 17-18 are taught via claims 10-11.

In reference to claims 19, see the rejection of claims 5-6.

Claim 20 is rejected as claim 11.

As per claim 21, see the rejection of claim 13.

The features of claim 22 are taught via claims 10.

In reference to claim 23, see the rejection of claim 12.

Claim 24 is rejected as claim 8.

As per claim 25, see the rejection of claim 1.

The features of claim 26-28 are taught via claims 12.

In reference to claim 29-30, see the rejection of claim 10.

Claim 31 is rejected as claim 8.

As per claim 32, see the rejection of claim 12.

The features of claims 33 are taught via claims 5-6.

The patent to Smirnov et al. is also considered pertinent to the applicant's invention.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Chavis whose telephone number is (703) 571-3720. The examiner can normally be reached on M-Tue & Th-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703) 571-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read "John Chavis". The signature is fluid and cursive, with the first name "John" and last name "Chavis" clearly distinguishable.

John Chavis  
Primary Examiner AU-2124